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July 1997

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Early Childhood and Child Care Study

Summary of Findings

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ERRATA

p. 4 Exhibit 2 Nutrient Standards Used in the Early Childhood and Child Care Study

The last two bullets should read:

- Limit cholesterol intake to 300 mg or less per day
- Limit sodium intake to 2,400 mg or less per day

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Background

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The Child and Adult Care Food Program (CACFP) is a Federal program that provides meals and snacks in child and adult day care facilities. The child care component of the CACFP provides Federal funds for meals and snacks served to children in nonresidential day care facilities. These include family and group day care homes (homes), Head Start centers, and some child care centers. In fiscal year 1995, the program served an average of 2.3 million children daily at a cost of \$1.5 billion. Forty-two percent of these children were served through homes; 58 percent through centers.

Home- and center-based child care are fundamentally different. Because home- and center-based care are so different, the CACFP applies different rules for reimbursement and administration, as well as different criteria for participation, to the two types of providers.

Licensed centers may participate in the CACFP independently or under the aegis of a nonprofit agency that assumes administrative responsibility for the centers it sponsors (sponsored centers). Centers receive three different categories of reimbursement for the meals and snacks they serve, based on children's family income. Meals and snacks served to children from families with income at or below 130 percent of poverty are reimbursed at the "free" (highest) rate; meals served to children from families with income between 130 percent and 185 percent of poverty are reimbursed at the "reduced-price" (somewhat lower) rate; and meals and snacks served to children from families with income above 185 percent of poverty are reimbursed at the "paid" (lowest) rate. The reimbursement rates in effect in 1994-1995 are shown in (Exhibit 1). Reimbursement is limited to a maximum of two meals and one snack or one meal and two snacks for children in care fewer than eight hours per day. At the time this study was conducted, centers could receive reimbursement for an additional meal or snack for children in care eight or more hours per day.

Exhibit 1**CACFP Reimbursement Rates for Child Care Centers****July 1994–June 1995**

Eligibility Category	Breakfast	Lunch/Supper	Snack
Free	\$0.9750	\$1.7575	\$0.4825
Reduced-price	\$0.6750	\$1.3575	\$0.2400
Paid	\$0.1925	\$0.1700	\$0.0450

In order to participate in the CACFP, family day care homes must meet State licensing requirements, where these are imposed, or be approved by a Federal, State, or local agency. In addition, homes must be sponsored by an organization that assumes responsibility for ensuring compliance with Federal and State regulations and that acts as a conduit for meal reimbursements to family day care providers. At the time this study was conducted, homes were reimbursed at a flat rate for each meal or snack served. The 1994–1995 reimbursement rates for homes were \$0.8275 for breakfasts; \$1.5050 for lunches and suppers; and \$0.4475 for snacks. Meals served to the provider's own children were reimbursable only if the provider's income did not exceed 185 percent of the poverty threshold.

This publication, which is based on the Early Childhood and Child Care Study, describes the institutions and children that participate in the CACFP. It also describes the nutrient content of meals and snacks *offered* by participating sites (CACFP providers) and the meals and snacks *consumed* by children while receiving care in those sites (CACFP participants). Finally, information is presented on the relative nutrition knowledge of individuals with primary responsibility for preparing CACFP meals and snacks and the extent to which CACFP providers are using desirable food service practices. The information presented in this report reflects program operations before the implementation of changes stemming from the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193). This act mandated several changes to CACFP regulations including changes in the reimbursement structure for homes and the reduction in the number of meals that CACFP centers may claim for reimbursement.

The Early Childhood and Child Care Study collected information from nationally representative samples of sponsoring agencies, participating child care sites, and children. A total of 1,962 CACFP providers supplied information about all meals and snacks offered during a one-week period between January and June, 1995. Observers recorded detailed information about the foods and beverages consumed by a total of 1,347 children while they were in child care. Information on household characteristics was obtained through interviews with 1,951 parents or primary caregivers of these children.

The study compares the nutrient content of meals and snacks *offered* and *consumed* with several nutrient standards (Exhibit 2). These standards are used solely for the purpose of providing benchmarks to facilitate interpretation of the nutrient data. CACFP providers are not required to meet these, or any other, nutrient-based standards.

Exhibit 2

Nutrient Standards Used in the Early Childhood and Child Care Study

National School Lunch Program and School Breakfast Program

- One-fourth of the RDA for breakfast
- One-third of the RDA for lunch

***Dietary Guidelines for Americans*¹**

- Limit intake of total fat to no more than 30 percent of total calories
- Limit intake of saturated fat to less than 10 percent of total calories

National Research Council's *Diet and Health Report*¹

- Increase intake of carbohydrate to at least 55 percent of total calories
- Limit cholesterol intake to 2,400 mg or less per day
- Limit sodium intake to 300 mg or less per day

¹ Applied only to meals offered to and consumed by children five years of age and older.

The Recommended Dietary Allowances (RDA) are the levels of intake of essential nutrients that are adequate to meet the known nutrient needs of practically all healthy persons. They are traditionally used to plan menus for schools and other group feeding programs. The National School Lunch Program (NSLP) requires that lunches provide one-third or more of the RDA. The School Breakfast Program (SBP) requires that breakfasts provide one-fourth of the RDA. Recent regulations require that Head Start programs meet these same nutritional requirements (45CFR 1304). Head Start performance standards further specify that children in part-day programs must receive at least one-third of the RDA and that children in full-day programs must receive one-half to two-thirds of the RDA, depending on the length of the program day. This study examined the contribution of CACFP meals and snacks to the RDA for calories as well as five key nutrients targeted by USDA in ongoing efforts to improve the nutritional quality of meals offered in the NSLP and SBP (protein, vitamin A, vitamin C, calcium, and iron).

The *Dietary Guidelines for Americans* provide broad food-based recommendations for a healthy diet as well as quantitative goals for intake of total fat and saturated fat (expressed as a percentage of total calories). While the quantitative goals for intake of fat and saturated fat apply only to children five years of age and older, it is recommended that children between the ages of two and five consume gradually diminishing amounts of fat and saturated fat so that, by about five years of age, children are consuming a diet that is consistent with the *Dietary Guidelines* goals. In keeping with the *Dietary Guidelines* recommendation, quantified standards for the percentage of calories from the various macronutrients have been applied only to meals offered and consumed by children five years of age and older.

Because the *Dietary Guidelines* do not provide quantitative goals for carbohydrate, sodium or cholesterol intake, the standards used in this study are based on recommendations of the National Research Council (NRC), as published in their report, *Diet and Health*. Quantified standards for cholesterol and sodium, like those for the percentage of calories for the various macronutrients, have been applied only to children age five and above.

Characteristics of Participating Homes and Centers

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CACFP is administered in two different child care settings—homes and child care centers, including Head Start centers. Homes are private, and must have CACFP sponsors. Centers can be public or private and do not require sponsors. If a center is private, it must be either nonprofit or, if for-profit, at least 25% of its children must receive compensation for child care under Title XX of the Social Security Act.

Homes are much smaller than centers.

Homes enroll an average of eight children, including a provider's own children. After adjusting for absenteeism, an average of seven enrolled children are in care on a daily basis. Centers are considerably larger than homes. The average

Head Start center enrolls 60 children, while the average child care center enrolls 70 children. Average daily attendance is 53 for Head Start centers and 57 for child care centers.

Homes and child care centers offer full-day care, five days per week; Head Start centers tend to offer part-day programs.

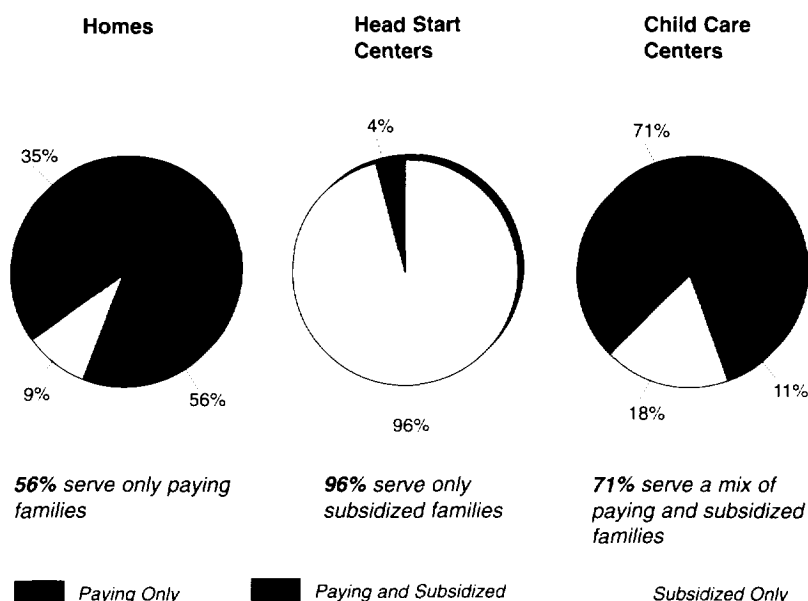
The typical home provides care 11 hours per day, five days per week, on a year-round basis. Child care centers operate an average of 10 hours per day, five days per week. Head Start centers, on the other hand, are open an average of about eight hours per day, and nearly one-third (31%) are open fewer than five days per week. In addition, most Head Start centers follow school calendars rather than being open year-round.

Head Start programs do not offer typical child care services. Rather, these programs are best viewed as comprehensive child development programs intended to promote social competence and improve the emotional and cognitive development of low-income children. While some Head Start centers combine part-day programs with full-day, work-related child care programs, most Head Start centers operate part-day programs.

Funding sources differ by type of provider (Figure 1).

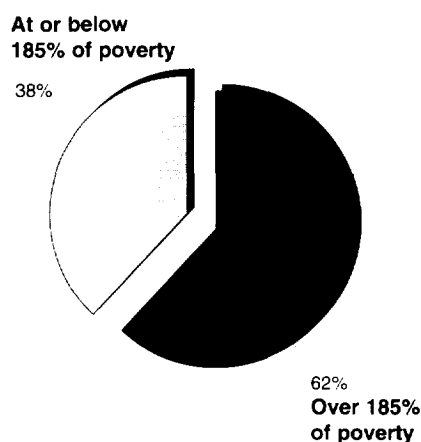
More than half (56%) of family day care providers are funded exclusively by parent fees. In contrast, almost all (96%) Head Start centers are funded exclusively by government subsidies. Nearly three-quarters (71%) of child care centers are funded by both parent fees and government subsidies. Parent fees are comparable in homes and child care centers. The average hourly fee for full-time, unsubsidized care is \$1.90 in homes and \$1.98 in child care centers.

Figure 1. Funding Sources Differ by Type of Provider



Characteristics of Children and Their Families

Figure 2. Almost 40% of Family Day Care Providers Are At or Below 185% of Poverty



Almost 40% of family day care providers are at or below 185% of poverty (Figure 2).

For the average family day care provider, child care is an important source of household income. Total child-care income, including CACFP meal reimbursements, accounts for 43 percent of providers' median household income. For low-income providers, child care income accounts for more than one-half (55%) of total household income. On average, income from CACFP accounts for a relatively small proportion (14%) of providers' child care income.

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CACFP benefits were originally targeted at children from low-income families. Program coverage expanded in the late 1970s when the elimination of the means test in participating homes (P.L. 95-627) enabled family day care providers to receive reimbursement for meals and snacks served to all children (other than the provider's own children), regardless of family income.

Most recently, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193) seeks to refocus the family day care portion of the program on low-income children by targeting benefits to homes serving children from low-income

families. The characteristics of participating children and families covered in this report summary reflect the operation of the program before the implementation of this legislation.

Most of the children participating in the CACFP are preschoolers between the ages of three and five (Figure 3).

Virtually all of the children (99%) who participate in the CACFP through Head Start centers are between the ages of three and five. Other child care centers, and particularly family day care homes, serve a more varied group of children. Nonetheless, preschoolers account for two-thirds of the children in centers and 42 percent of the children in homes.

Figure 3. Most Children Are Preschoolers Between the Ages of Three and Five

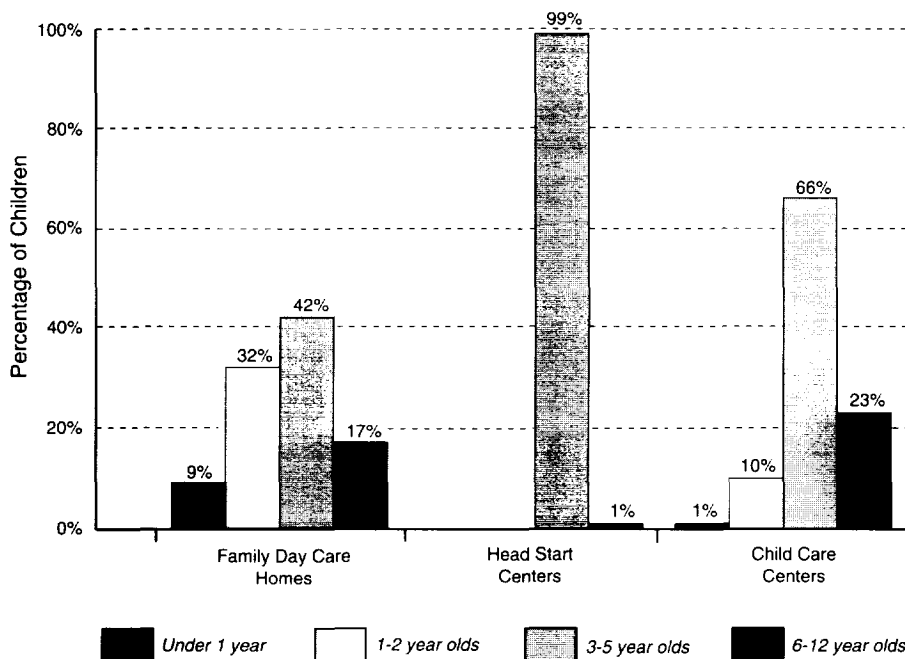
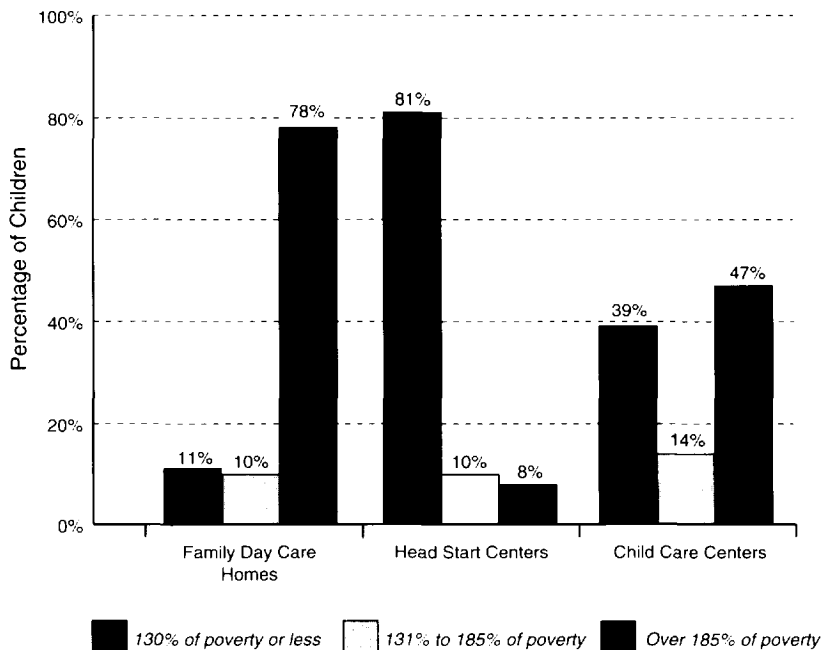


Figure 4. The Majority of Children in Homes Are From Families With Incomes Higher than 185% of Poverty

Children in homes tend to come from households with higher incomes than children in centers (Figure 4).

The median family income of children receiving care in homes is \$40,484, compared with \$10,433 for children in Head Start centers and \$24,022 for children in child care centers. More than three-quarters (78%) of the children in homes are from families with incomes above 185 percent of the poverty threshold. By contrast, only eight percent of children in Head Start centers and 47 percent of children in child care centers are from families with incomes above this threshold.



Meals and Snacks Offered by CACFP Providers

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The goal of the CACFP is to provide nutritious meals and snacks to children in child care programs. To this end, USDA has established meal pattern requirements designed to ensure that meals and snacks offered by CACFP providers include the kinds and amounts of food required to meet children's daily energy and nutrient needs (Exhibit 3).

In addition, program regulations specify minimum amounts of each component to be offered to children of different ages. The average portions taken at breakfast and lunch are generally equivalent to or greater than the minimum portions specified in the CACFP meal pattern. CACFP providers are not required to meet specific nutrient-based standards. The findings reported below are consistent for homes, Head Start centers, and child care centers except when noted.

On an average day, more than nine out of ten CACFP breakfast menus and

about 87 percent of CACFP lunch menus comply with all component requirements. The component most often missing is juice, fruit or vegetable. In the case of CACFP lunches, it is the second serving of this component that is most often omitted.

CACFP providers rarely offer children choices within a meal component category, such as a choice between two types of cereal at breakfast or two main dishes at lunch. CACFP providers do offer children a variety of different foods over the course of a typical week, however. An average of four different types of fruit, vegetables, or juice are offered at breakfast, as well as three to four different types of bread or acceptable bread alternates.

Lunches include even more variety. Over the course of a typical week, CACFP providers offer children nine to 10 different types of fruit, vegetables, or full-strength juices; three different types

Exhibit 3 CACFP Meal Component Requirements for Children

Breakfast

One serving each:

- fluid milk
- 100% juice, fruit, or vegetable
- bread or cereal

Lunch or Supper

One serving each:

- fluid milk
- meat or acceptable meat alternate
- bread or acceptable bread alternate

Plus:

- two servings of fruit and/or vegetables

Snacks

A total of two servings:

- fluid milk
- meat or acceptable meat alternate
- bread or acceptable bread alternate
- 100% juice, fruit, or vegetable

of bread or acceptable bread alternates; and five different meats or meat alternates. The decreased variety of foods offered in the bread/bread alternate component at lunch, relative to other components, is due to frequent use of sandwiches and a reliance on white bread and sandwich rolls.

CACFP breakfasts provide more than one-fourth of the RDA for all key nutrients, but not for calories (Figure 5).

On average, breakfasts offered by CACFP providers supply more than one-half of the RDA for protein and vitamin A, about three-quarters of the RDA for vitamin C, and more than one-third of the RDA for calcium and iron. By comparison, breakfasts are low in calories, providing, on average, 19 percent of the RDA.

Figure 5. Breakfasts Provide More Than One-fourth of the RDA for All Key Nutrients but Not for Calories

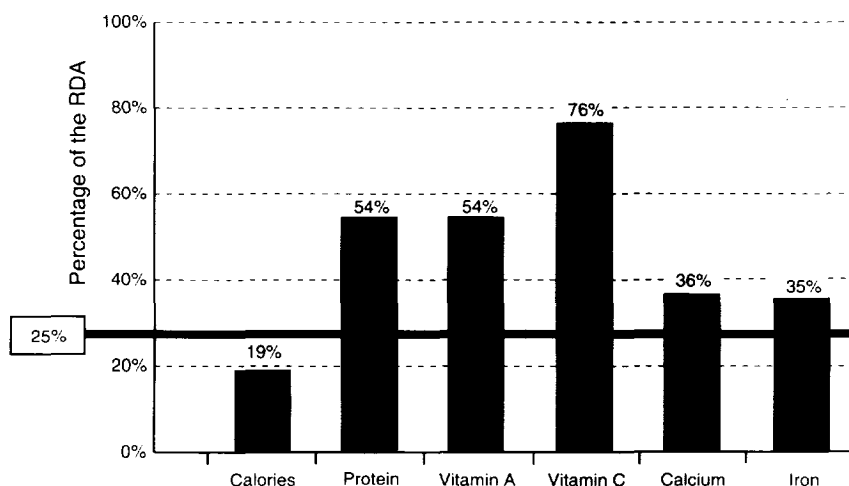


Figure 6. Breakfasts Meet the *Dietary Guidelines* Goal for Total Fat and the NRC Recommendation for Carbohydrate, but Not the Goal for Saturated Fat

CACFP breakfasts offered to children five years of age and older meet the *Dietary Guidelines* goal for percent of total calories from fat and the NRC recommendation for percent of calories from carbohydrate but do not meet the *Dietary Guidelines* goal for percent of calories from saturated fat (Figure 6).

The average percentage of calories from fat in breakfasts offered to children five years of age and older is 23 percent, a level that is consistent with the *Dietary Guidelines* goal of no more than 30 percent. The percentage of calories from carbohydrate (64 percent) is also consistent with the NRC recommendation (55 percent or more). The average percentage of calories from saturated fat is 11 percent, a level that exceeds the *Dietary Guidelines* goal of less than 10 percent. In addition, there is little evidence of decreasing amounts of saturated fat in breakfasts offered to children between the ages of two and five, as recommended by the *Dietary Guidelines*.

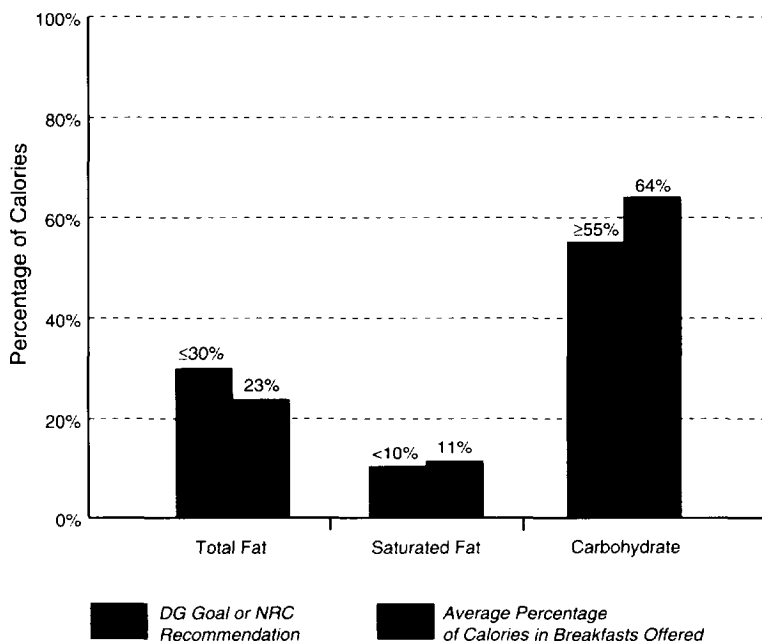
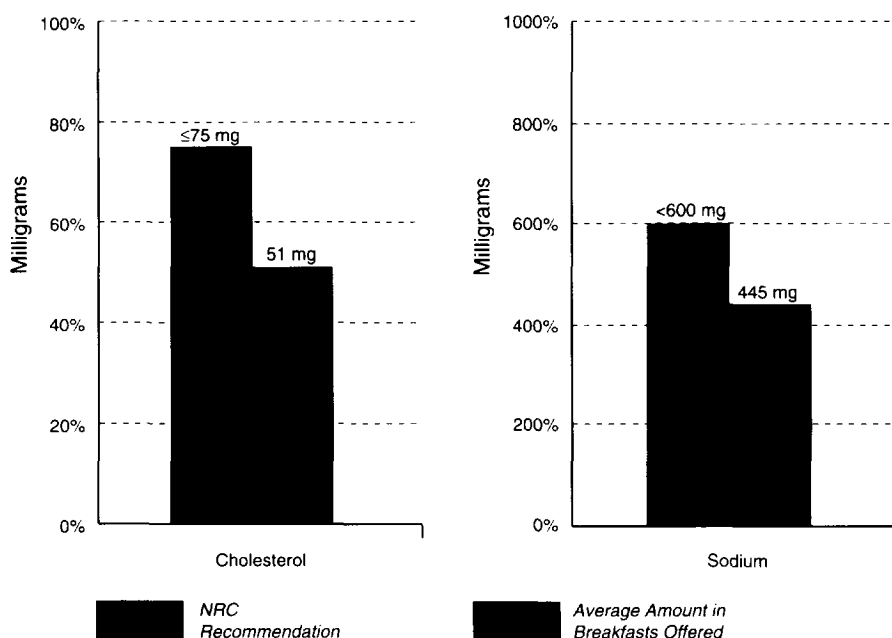


Figure 7. Breakfasts Meet NRC Recommendations for Cholesterol and Sodium



Average amounts of cholesterol and sodium in CACFP breakfasts offered to children five years of age and older are consistent with NRC recommendations (Figure 7).

The average amount of cholesterol in CACFP breakfasts offered to children over the age of five is 51 mg. This is within the recommended range of 75 mg or less (one-fourth of the suggested daily limit of 300 mg). Likewise, average sodium content of CACFP breakfasts, 445 mg, is consistent with the recommended range of 600 mg or less (one-fourth of the suggested daily limit of 2,400 mg).

CACFP lunches provide more than one-third of the RDA for all key nutrients except iron and less than one-third of RDA for calories (Figure 8).

On average, lunches offered by CACFP providers supply about 100 percent of the RDA for protein and vitamin A, about 50 percent of the RDA for vitamin C, and more than 40 percent of the RDA for calcium. CACFP lunches provide lesser amounts of calories and iron, averaging just over 25 percent of the RDA for each.

Figure 8. Lunches Provide More Than One-third of the RDA, Except for Calories and Iron

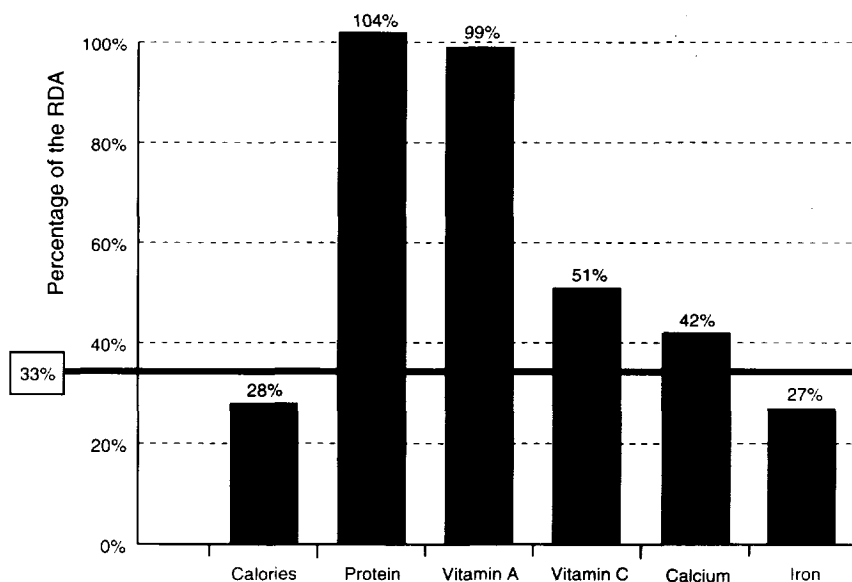


Figure 9. Lunches Do Not Meet *Dietary Guidelines* Goals for Total Fat or Saturated Fat or the NRC Recommendation for Carbohydrate

CACFP lunches offered to children five and older do not meet the *Dietary Guidelines* goals for percent of calories from total fat or saturated fat or the NRC recommendation for percent of calories from carbohydrate (Figure 9).

The average percentage of calories from fat in CACFP lunches offered to children five and older is 35 percent. The average percentage of calories from saturated fat in CACFP lunches is 14 percent. There is little evidence that the relative fat and saturated fat content of CACFP lunches decreases gradually in lunches offered to children between the ages of two and five. Moreover, CACFP lunches derive too few calories from carbohydrate. The carbohydrate level in CACFP lunches, as offered to children five and older, is 47 percent.

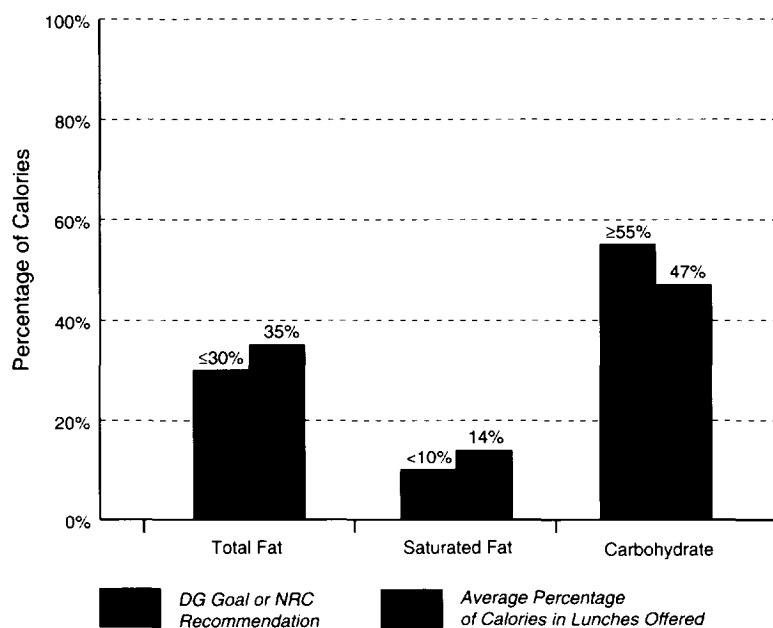
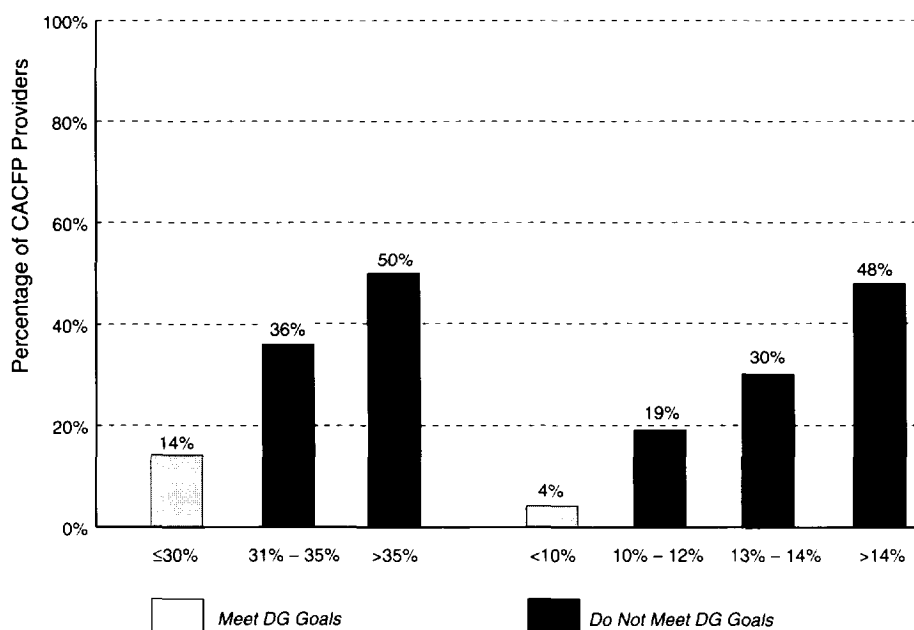


Figure 10. Few Providers Offer Lunches That Meet *Dietary Guidelines* Goals for Total Fat or Saturated Fat

Few CACFP providers offer lunches that meet *Dietary Guidelines* goals for percent of calories from total fat or saturated fat (Figure 10).

Only 14 percent of all providers offer lunches to children five years of age and older that meet the *Dietary Guidelines* goal. One-half of providers offer lunches that average more than 35 percent of calories from fat. The percentage of providers offering lunches that meet the *Dietary Guidelines* goal for calories from saturated fat is even lower (4 percent). Close to one-half of all providers (48%) offer lunches that derive more than 14 percent of calories from saturated fat.



CACFP lunches offered to children five and older meet the NRC recommendation for cholesterol, but not for sodium (Figure 11).

The average amount of cholesterol in CACFP lunches offered to children five and older is 65 mg. This is well within the recommended range of 100 mg or less (one-third of the suggested daily limit of 300 mg). Average sodium content of CACFP lunches is 919 mg. This exceeds the recommended range of 800 mg or less (one-third of the suggested daily limit of 2,400 mg).

CACFP providers offering low-fat lunches also meet RDA standards for most vitamins and minerals but provide fewer calories.

Lunches that meet the *Dietary Guidelines* goal for calories from fat are slightly lower in calories than other lunches but provide comparable or greater amounts of vitamins and minerals. These low-fat CACFP lunches also provide less sodium and cholesterol than other CACFP lunches.

Providers offering low-fat lunches tend to offer different types of food than providers that offer higher-fat lunches.

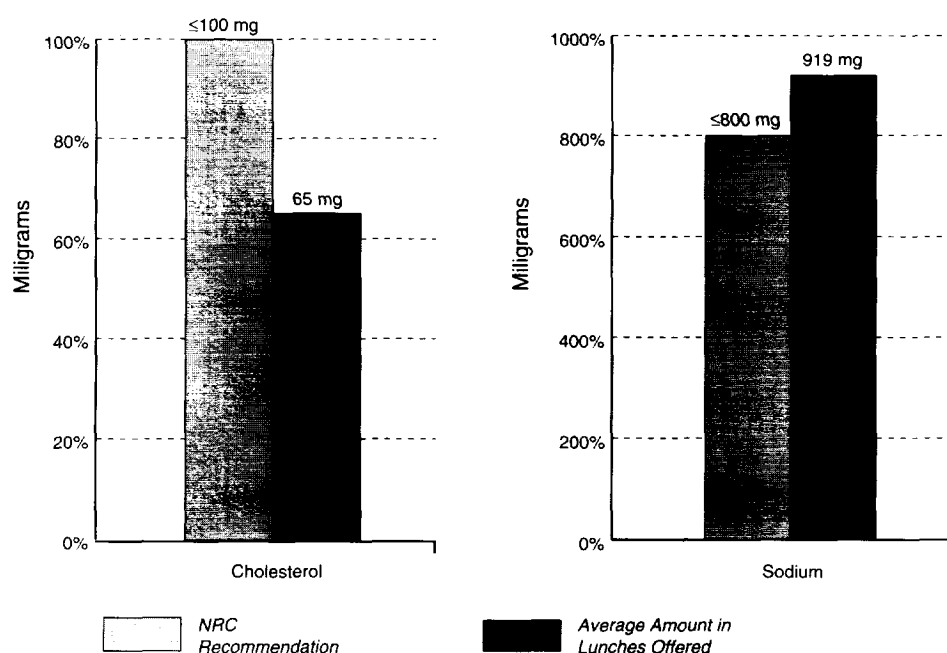
Providers offering lunches that meet the *Dietary Guidelines* goal of no more than 30 percent of calories from fat tend to offer the following foods more often than providers offering higher-fat lunches:

- 1% and skim milks;
- fruit, on a daily basis; and
- rice.

And they tend to offer these foods less often:

- whole milk;
- french fries and other processed/fried potatoes;
- breaded, processed or fried meat, poultry or fish;
- regular (as opposed to lean or extra lean) ground beef;
- regular (not low-fat) cheeses;
- regular (not low-fat) hot dogs and cold cuts;
- high-fat condiments such as butter, sour cream, cream cheese, and regular salad dressings.

Figure 11. Lunches Meet the NRC Recommendations for Cholesterol, but Not for Sodium



Both morning and afternoon snacks provide 10 percent or more of the RDA for calories and key nutrients (Figure 12).

CACFP snacks provide an average of more than 10 percent of the RDA for calories and equivalent or substantially larger percentages of the RDA for all key nutrients. Snacks are especially rich in vitamin C, providing, on average, about one-third (afternoon snacks) to 40 percent (morning snacks) of the RDA.

The full complement of meals and snacks offered by most CACFP providers supplies more than one-half of the RDA for calories and substantially more than two-thirds of the RDA for key nutrients.

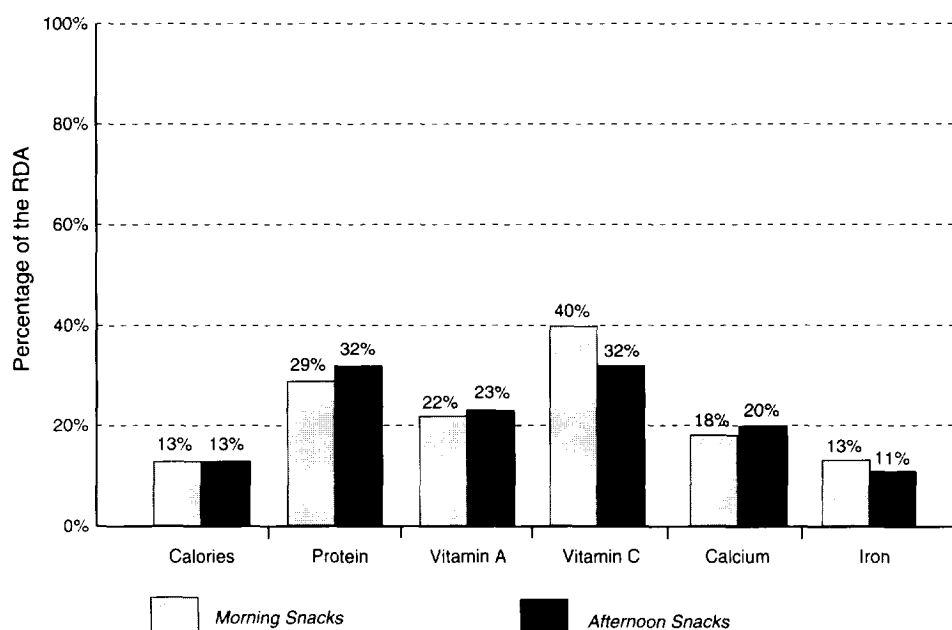
Forty-three percent of CACFP providers offer breakfast, lunch and one snack and 26 percent offer breakfast, lunch and two snacks. Both of these meal and snack combinations provide, on average, more than 60 percent of the RDA for calories. Both combinations also provide 100 percent or more of the RDA for protein, vitamin A, and vitamin C. Calcium levels approximate 100 percent of the RDA, and iron is provided at levels that exceed 70 percent of the RDA.

The full complement of meals and snacks offered by most CACFP providers meets or approximates the *Dietary Guidelines* goal for percent of calories from fat as well as the NRC recommendation for the percent of calories from carbohydrate, but does not meet the *Dietary Guidelines* goal for percent of calories from saturated fat.

The combination of breakfast, lunch, and one snack, as offered to children five years of age and older, supplies an average of 31 percent of calories from

fat and 55 percent of calories from carbohydrate. The combination of breakfast, lunch, and two snacks supplies an average of 30 percent of calories from fat and 56 percent of calories from carbohydrate. Both combinations exceed the *Dietary Guidelines* goal for calories from saturated fat, averaging 13 percent.

Figure 12. Snacks Provide 10 Percent or More of the RDA for Calories and Key Nutrients



Meals and Snacks Consumed by CACFP Participants

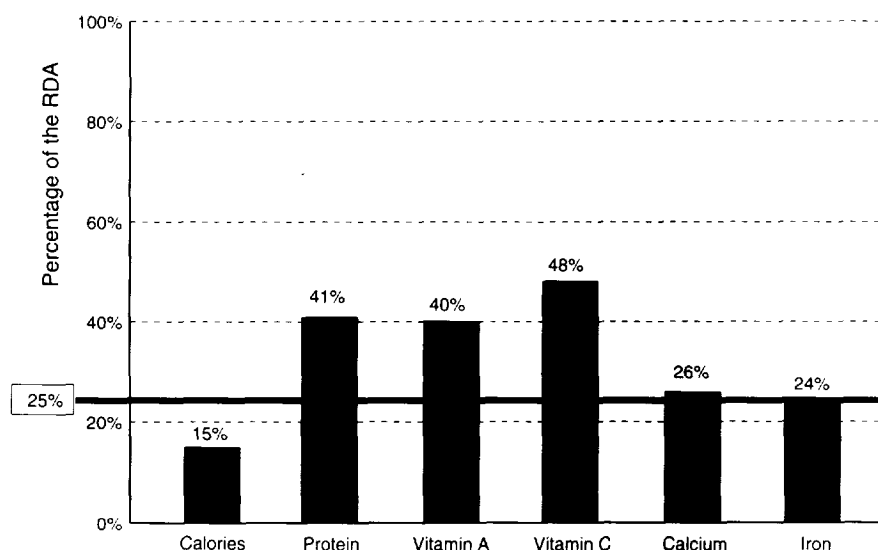
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The nutrient profile of meals and snacks actually consumed by participating children may differ from what is offered. For example, children may decline one or more of the foods offered; children may select portions that differ from the average portion; or children may waste (not consume) some of the food they take. It is therefore important to examine CACFP meals and snacks *as actually consumed* by children.

Breakfasts consumed by CACFP participants provide one-fourth or more of the RDA for all key nutrients except iron and less than one-fourth of the RDA for calories (Figure 13).

On a typical day, children receiving CACFP breakfasts consume about three-quarters of the food they take. Different types of food are consumed in approximately equal proportions. On average, breakfasts consumed by CACFP participants provide 40 percent or more of the RDA for protein, vitamin A, and vitamin C, and just over one-fourth of the RDA for calcium. Intake of iron from CACFP breakfasts is almost one-fourth of the RDA (24%). Caloric intake averages 15 percent of the RDA.

Figure 13. Breakfasts Consumed Provide One-fourth or More of the RDA Except for Calories and Iron



Breakfasts consumed by CACFP participants five years of age and older meet the *Dietary Guidelines* goal for percent of calories from total fat and the NRC recommendation for percent of calories from carbohydrate, but not the *Dietary Guidelines* goal for percent of calories from saturated fat (Figure 14). On average, 24 percent of the calories in breakfasts consumed by CACFP participants five years of age and older come from fat, a level that is consistent with the *Dietary Guidelines* goal of no more than 30 percent. The average percentage of calories from carbohydrate is 64 percent, which is consistent with the NRC recommendation of 55 percent or more. The average percentage of calories from saturated fat, 11 percent, exceeds the *Dietary Guidelines* goal of less than 10 percent.

Breakfasts consumed by CACFP participants five years of age and older meet NRC recommendations for cholesterol and sodium intake (Figure 15).

The average amount of cholesterol in CACFP breakfasts consumed by children five years of age and older is 38 mg, which meets the recommendation of 75 mg or less (one-fourth of the suggested daily limit of 300 mg). Likewise, children's average sodium intake from CACFP breakfasts, 356 mg, meets the recommendation of 600 mg or less (one-fourth of the suggested daily limit of 2,400 mg).

Figure 14. Breakfasts Consumed Meet the *Dietary Guidelines* Goal for Total Fat and the NRC Recommendation for Carbohydrate, but Not the Goal for Saturated Fat

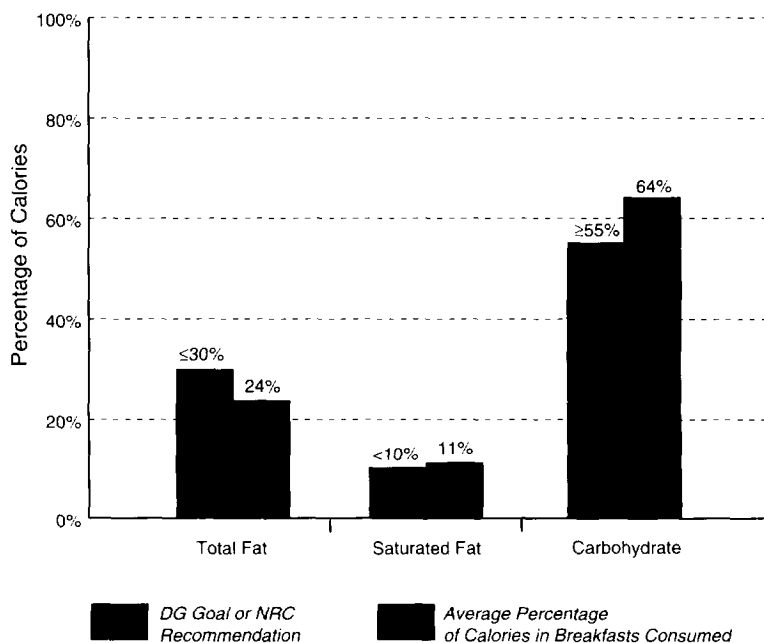


Figure 15. Breakfasts Consumed Meet NRC Recommendations for Cholesterol and Sodium

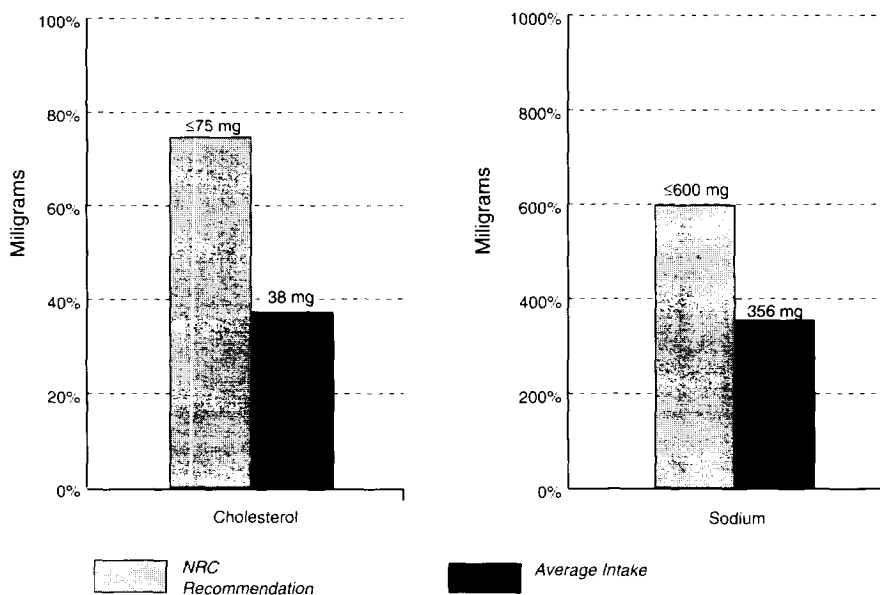
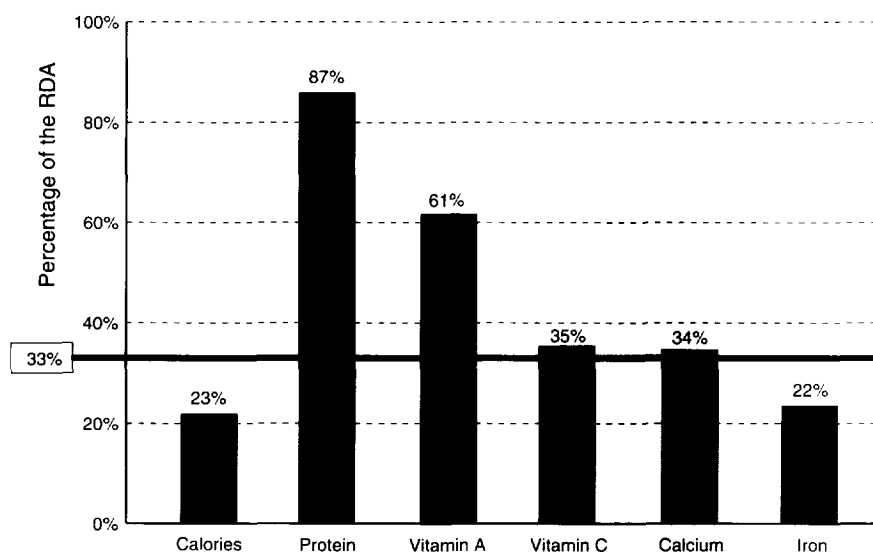


Figure 16. Lunches Consumed Provide One-third or More of the RDA Except for Calories and Iron

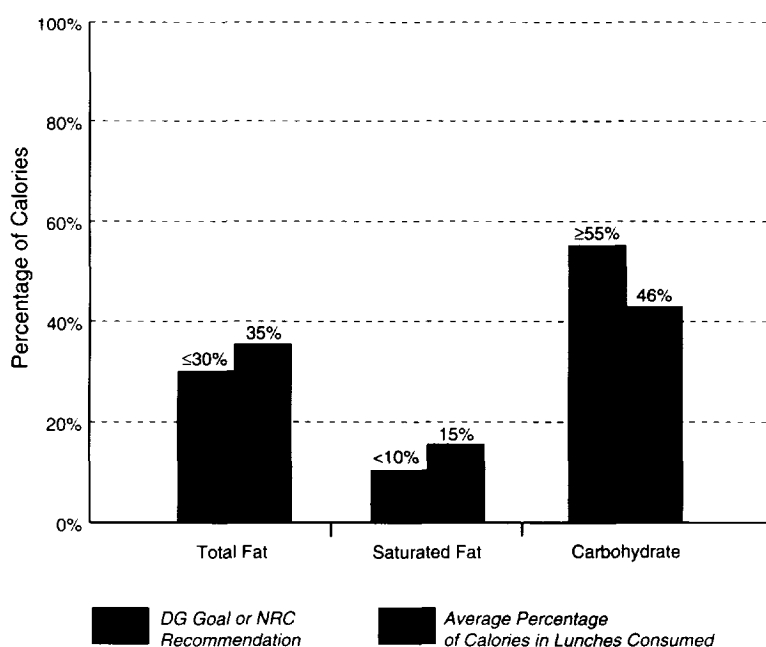


Lunches consumed by CACFP participants provide one-third or more of the RDA for all key nutrients except iron and less than one-third of the RDA for calories (Figure 16).

Children consume, on average, about 70 percent of the food they take at lunch. The average proportion of milk consumed is substantially higher (83%) and the average proportion of vegetables consumed is substantially lower (59%). Lunches consumed by CACFP participants provide more than three-quarters of the RDA for protein and more than one-half of the RDA for vitamin A.

Intakes of vitamin C and calcium from CACFP lunches approximate, on average, one-third of the RDA. Intakes of calories and iron average 23 percent and 22 percent of the RDA, respectively.

Figure 17. Lunches Consumed Do Not Meet *Dietary Guidelines* Goals for Total Fat or Saturated Fat or the NRC Recommendation for Carbohydrate



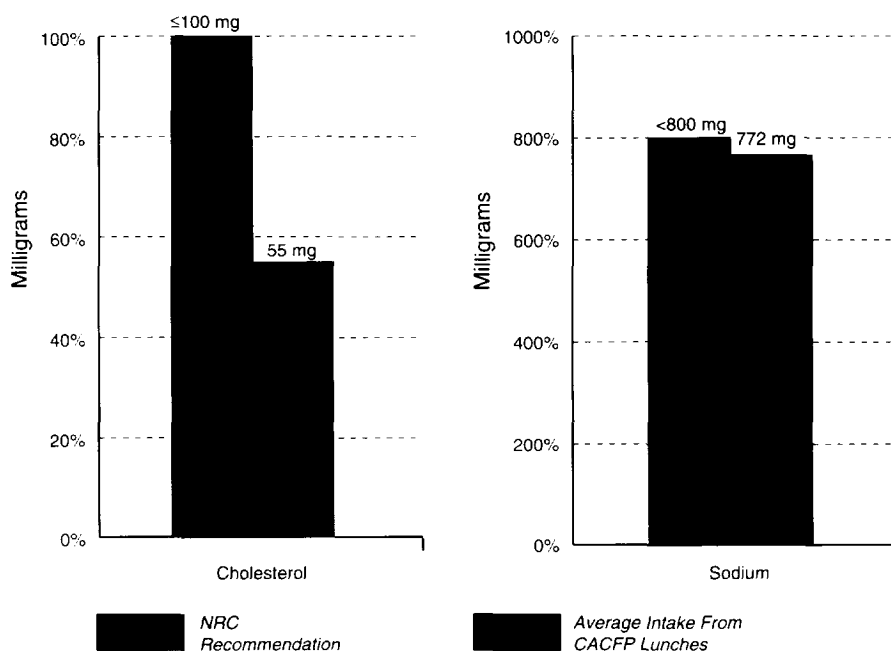
Lunches consumed by CACFP participants five years of age and older do not meet the *Dietary Guidelines* goals for percent of calories from total fat or saturated fat or the NRC recommendation for percent of calories from carbohydrate (Figure 17).

The average percentage of calories from fat in lunches consumed by CACFP participants five years of age and older is 35 percent, which exceeds the *Dietary Guidelines* goal. The average percentage of calories from saturated fat, 15 percent, also exceeds the *Dietary Guidelines* goal. Finally, the average percentage of calories from carbohydrate is 46 percent, an amount that is lower than the NRC recommendation.

Figure 18. Lunches Consumed Meet NRC Recommendations for Cholesterol and Sodium

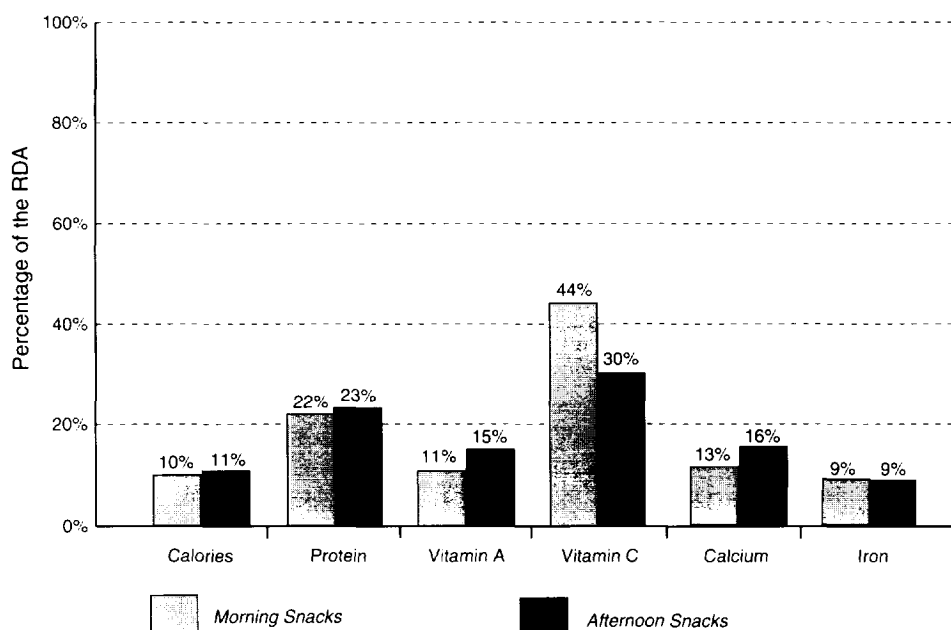
Lunches consumed by CACFP participants five years of age and older meet NRC recommendations for cholesterol and sodium intake (Figure 18).

Children five years of age and older consume an average of 55 mg of cholesterol from CACFP lunches, an amount which meets the recommendation of 100 mg or less (one-third of the suggested daily limit of 300 mg). Children's average sodium intake from CACFP lunches, 772 mg, also meets the recommendation of 800 mg or less (one-third of the suggested daily limit of 2,400 mg).



Snacks consumed by CACFP participants provide, on average, at least 10 percent of the RDA for calories and most key nutrients (Figure 19).

Both morning and afternoon snacks consumed by CACFP participants provide 10 percent or more of the RDA for calories, vitamin A, and calcium and more than 20 percent of the RDA for protein. CACFP snacks provide at least 30 percent of the RDA for vitamin C. CACFP snacks, as consumed, provide nine percent of the RDA for iron.

Figure 19. Snacks Consumed Provide At Least 10 Percent of the RDA for Calories and Most Key Nutrients

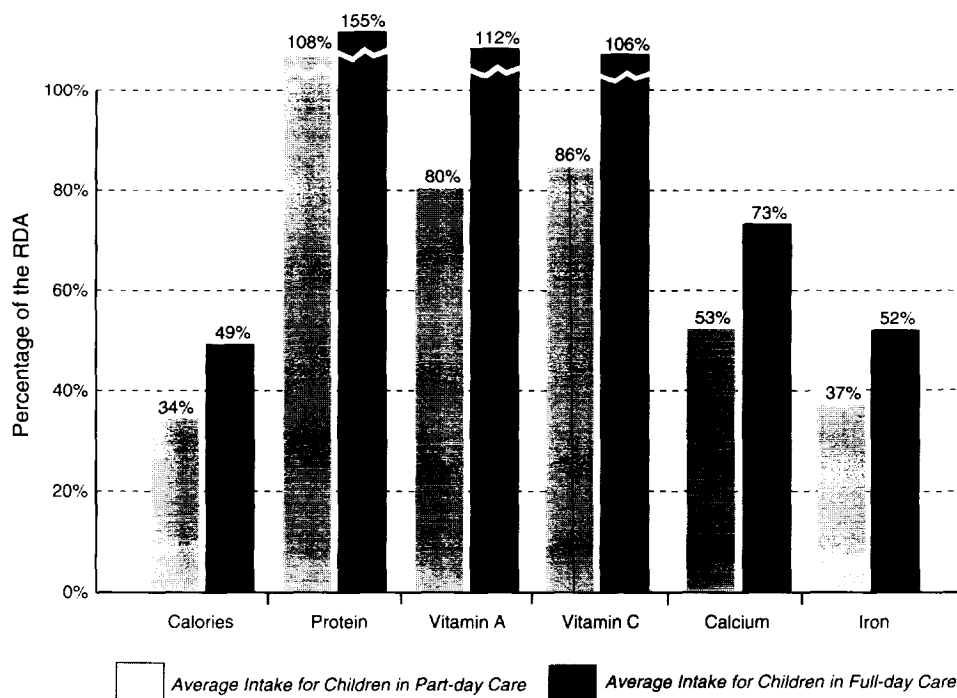
With the exception of calories and iron, children in part-day care consume more than one-half of the RDA from CACFP meals and snacks and children in full-day care consume more than two-thirds of the RDA (Figure 20).

On a typical day, children in care at least four but less than eight hours per day (part-day care) consume, from CACFP meals and snacks, an average of about one-third of the RDA for calories and iron. Intakes of other nutrients exceed one-half of the RDA and, in some cases, are substantially higher, averaging 102 percent of the RDA for protein, 78 percent of the RDA for vitamin A, and 82 percent of the RDA for vitamin C.

percent of the RDA for vitamin C. Mean intake of part-day children receiving care in child care centers are markedly lower than part-day children receiving care in homes. This is not unexpected, given that 36 percent of part-day children in centers receive only one meal or snack.

Children in care eight or more hours per day (full-day care) consume an average of about 50 percent of the RDA for calories and iron. Intakes of other nutrients exceed two-thirds of the RDA, often by a substantial margin. Average intakes of protein, vitamin A, and vitamin C, for example, exceed 100 percent of the RDA.

Figure 20. Except for Calories and Iron, Children in Part-day Care Consume More Than One-half of the RDA While Full-day Children Consume More Than Two-thirds of the RDA



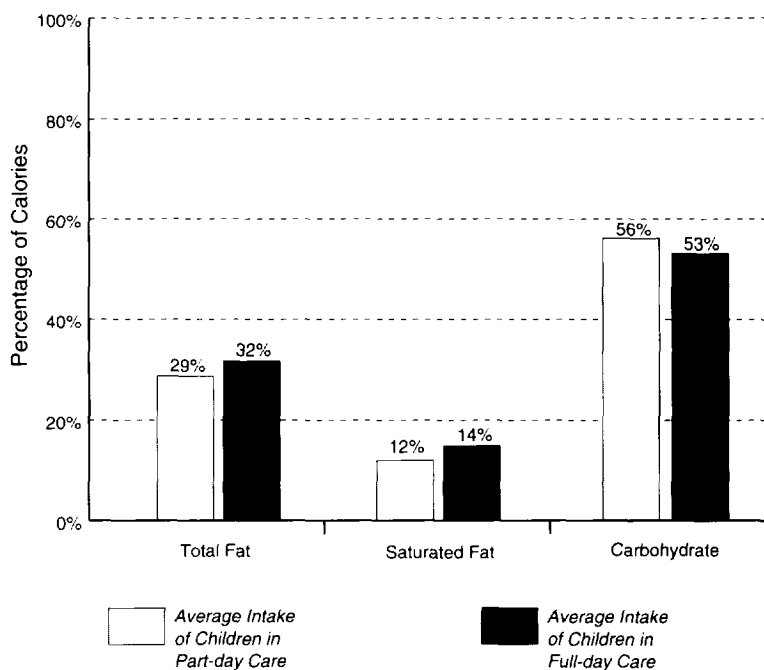
The average intake of five-year-olds in part-day care meets the *Dietary Guidelines* goal for percent of calories from total fat and the NRC recommendation for percent of calories from carbohydrate, but not the *Dietary Guidelines* goal for percent of calories from saturated fat. The average intake of children in full-day care does not meet any of these standards (Figure 21).

The average percentage of calories from fat in CACFP meals and snacks consumed by five-year-olds in part-day care is 29 percent, which meets the *Dietary Guidelines* goal. The average percentage of calories from carbohydrate, 56 percent, is also in line with the NRC

recommendation. However, the average percentage of calories from saturated fat (12 percent) exceeds the *Dietary Guidelines* goal of less than 10 percent.

The average intake of five-year olds in full-day care provides 32 percent of calories from fat and 12 percent of calories from saturated fat. Both of these levels exceed *Dietary Guidelines* goals. Likewise, the average percentage of calories from carbohydrate, 53 percent, is less than the NRC-recommended level of 55 percent or more.

Figure 21. The Average Intake of Part-day Children Differs from Full-day Children for Total Fat, Saturated Fat, and Carbohydrate

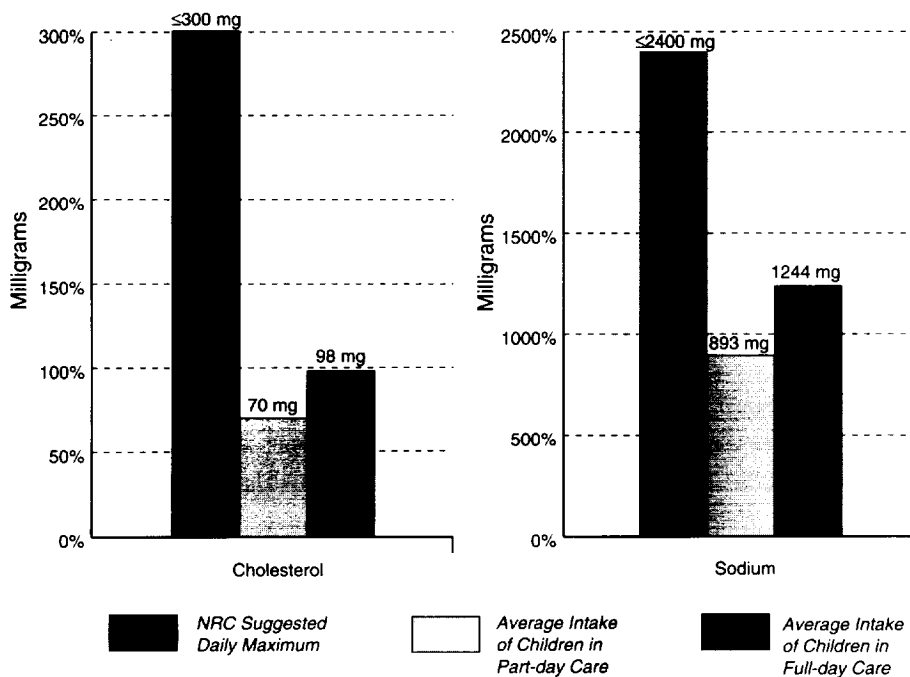


On average, five-year-olds consume about one-fourth to one-third of the suggested daily limit of cholesterol and about forty to fifty percent of the suggested daily limit of sodium from CACFP meals and snacks (Figure 22).

CACFP meals and snacks consumed by five-year-olds in part-day care provide 70 mg of cholesterol, which is equivalent to approximately 23 percent of the suggested daily limit of 300 mg or less. Five-year-olds in full-day care consume an average of 98 mg of cholesterol, equivalent to approximately 33 percent of the suggested daily limit.

Five-year-olds in part-day care consume an average of 893 mg of sodium from CACFP meals and snacks. This is equivalent to approximately 37 percent of the recommended daily limit of 2,400 mg or less. Five-year-olds in full-day care consume an average of 1,244 mg of sodium, equivalent to approximately 52 percent of the suggested daily limit.

Figure 22. Children's Intake of Cholesterol and Sodium from CACFP Meals and Snacks is Not Excessive



Nutrition Knowledge and Practices of CACFP Food Preparers



Individuals with primary responsibility for preparing CACFP meals and snacks were interviewed to assess levels of nutrition knowledge as well as the extent to which desirable food service practices are being used in the CACFP. For family day care homes, the provider was almost always the respondent. For most centers, the respondent was the center cook. In cases where meals were prepared off-site, whether for homes or for centers, the respondent was the responsible cook in the off-site preparation facility.

The average CACFP food preparer is familiar with many principles of good nutrition.

On average, CACFP food preparers answered almost three-quarters (73%) of the nutrition knowledge items correctly. Food preparers are more knowledgeable about ways to implement the *Dietary Guidelines* than they are about general nutrition facts, however. The average score for items dealing with general nutrition knowledge (for example, good sources of vitamins A, C and iron) was 69 percent, compared to a score of 77 percent for items having to do with strategies for implementing the *Dietary Guidelines*.

Some CACFP food preparers have misconceptions about food sources of key nutrients.

Almost all CACFP food preparers are aware that dietary intake can influence disease risk and most are familiar with the Food Guide Pyramid. Food preparers have some misconceptions, however, about food sources of key nutrients, particularly vitamin A. Almost all food preparers are aware that children need to consume a variety of foods and that new foods should be offered to picky eaters. One-third of all food preparers are misinformed about the importance of carbohydrate, however, believing that children's intake of "starchy" foods should be limited because these foods are "fattening."

CACFP food preparers are familiar with many strategies for implementing the *Dietary Guidelines*.

CACFP food preparers are knowledgeable about techniques that can be used to implement the *Dietary Guidelines*. In general, food preparers are most knowledgeable about ways to decrease sodium. Most are also aware of techniques that can be used to increase fiber and to decrease fat, saturated fat, and sugar. Food preparers are least knowledgeable about techniques for increasing carbohydrate content of child care meals.

According to food preparers, CACFP sites are implementing many food service practices that are consistent with *Dietary Guidelines* principles.

Overall, CACFP providers reportedly use, at least some of the time, close to three-quarters of the desired food service practices assessed in this study. Approximately 80 percent or more of all providers keep sugar bowls, butter/margarine, and salt shakers off the tables where children eat; avoid use of sweetened cereals; offer foods made with dried beans or peas; offer lean meat, chicken or fish; remove skin from chicken before cooking; offer low-fat or skim milk to children over the age of three; and use herbs and spices rather than salt to flavor foods.

CACFP food preparers with responsibility for food purchasing make frequent use of nutrition labels.

More than nine out of ten CACFP food preparers reported that they always or sometimes read the nutrition information on food package labels and consider nutrient content when making food purchasing decisions. Almost all food preparers compare the nutrient content of different brands and review ingredient lists.

When making purchasing decisions, CACFP food preparers give paramount consideration to the need to provide children with a variety of different foods.

When making food purchasing decisions, more than two-thirds of all CACFP food preparers consider children's feeding and eating abilities, food preferences, and the need to introduce children to new foods. Sanitation considerations are also important to food purchasing decisions. More than three-quarters of all food preparers consider possible sanitation/cleanliness problems when deciding whether or not to purchase a particular food item. Required preparation time is also a consideration for 62 percent of CACFP food preparers.

With regard to nutrient content, sugar is a major concern of CACFP food preparers. Cited by 81 percent of all respondents, sugar content is the second most common purchasing consideration (the need to provide a variety of foods is the most common consideration). Other aspects of nutrient content receive less focus, particularly fiber and vitamin C. Cost is a comparatively less important consideration in CACFP food purchasing decisions. Less than one-half of all food preparers included cost on the list of factors they consider often when making purchasing decisions.